

## **MINIMUM WEIGHT DESIGN OF TAPERED STEEL I-COLUMNS.**

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**Abstract:** As I-shapes are widely used in design, the optimum proportioning of a tapered I-column from the viewpoint of practical minimum weight design is presented. While the web is tapered by a linear variation in depth, the flange area necessary to prevent buckling in the plane perpendicular to the web has been kept unchanged throughout the length of the column. The column is assumed to be slender enough so as to permit an optimum proportioning based on elastic buckling. Using a direct search technique, the optimum tapered I-column is determined within the feasible design space.